



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,944	02/05/2004	John E. Kast	151P08970US02	5311
54228	7590	06/01/2009	EXAMINER	
IPLM GROUP, P.A. POST OFFICE BOX 18455 MINNEAPOLIS, MN 55418			OROPEZA, FRANCES P	
			ART UNIT	PAPER NUMBER
			3766	
			MAIL DATE	DELIVERY MODE
			06/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/772,944	KAST ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	FRANCES P. OROPEZA	3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 2/18/09 (Response and Affidavit).
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Response***

1. In response to the Non-Final Office action mailed the 10/08/08, the Applicant filed and Affidavit and arguments. Both of these submissions are commented upon below.

### ***Claim Rejections - 35 USC § 103***

2. Claims 1-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leysieffer (U.S. Patent No. 6,154,677) (cited previously).

As related to claims 1 and 2, Leysieffer substantially discloses the instant invention comprising an implantable medical device (54) adapted to be charged with an external recharging coil (106), the device comprising a housing (72) having an interior cavity, a proximal face, and an electrical feedthrough, the hermetically sealed penetrations (108) are read as electrical/ recharge feed-through (col. 4 @ 56-60) on the proximal face, electronics carried in the housing interior cavity, the electronics configured to perform a medical therapy (74), a rechargeable power source (90) carried in the housing interior cavity and electrically coupled to the electronics; and, a recharging coil (106) electrically coupled through the housing electrical feed-through (108) to the electronics and rechargeable power source (90) (Figures 1, 5; col. 4 @ 14-60).

As related to the recharging coil being centrally located and substantially carried on the housing proximal face, Leysieffer discloses the recharging coil is located on at least a part of the broad side of the housing (col. 7 @ 44-46). Absent any teachings of criticality or unexpected results, merely changing the location of the coil on the exterior face of the housing to a central

location would be an obvious design choice. (Instant application, page 2, lines 15-18 - “the recharging coil can either be carried on the proximal face... or detached ... and located remotely”).

In the response filed 2/18/09, the Applicant submitted an Affidavit stating and providing data that efficiency of the charge transfer is optimized by positioning the primary recharging coil as concentrically as possible with the secondary recharging coil. While the Examiner appreciates this has been the finding of Mr. John E. Kast as noted in his Affidavit, if placement of the recharging coil concentrically on a proximal face of the housing was critical or if it proved unexpected results, it is maintained the Applicant would have made this point in the instant specification. In fact the instant specification states on page 2, lines 15-18 - “the recharging coil can with be carried on the proximal face... or detached... and located remotely”. Given the instant specification does not discuss the criticality of the placement of the recharging coil centrally on the proximal face of the house, and does not discuss and unexpected results that are derived from placing the recharging coil centrally on the proximal face of the housing, it is accepted changing the location of the coil on the exterior face of the housing to a central location on the housing would be an obvious design choice.

The Applicant’s arguments filed 2/18/09 have been fully considered, but they are not convincing.

The Applicant argues figures 6 and 8 of Leysieffer do not teach a centrally located coil.

The Examiner has not referenced figures 6 nor 8 in the rejection of record, hence there will be no further comment on the Applicant's comments relative to figures 6 and 8.

The Applicant asserts in figure 5 that Leysieffer teaches away from locating a recharging coil centrally on a proximal face of an implanted device. The Examiner respectfully disagrees. When one reads further than the citation offered by the Applicant (column 5, lines 28-42), and down to line 59 of column 5, Leysieffer discusses the benefit of compactness associated with this specific configuration, and given the receiving coil location, offers ways which the energy transmission can be optimized, hence Leysieffer is not read as teaching away from the instant invention.

As relate to claims 3, 5, 8 and 10-13, the coil is connected mechanically tightly to the housing using polymer jacketing (104), read as the coil cover, and polymer over-molding, read as a means for attaching the recharge coil to the housing (col. 4 @ 42-53; col. 7 @ 20-23).

As related to claims 4, 6, 7 and 9, alignment details (poles) and attachment details are provided for the housing and coil cover (104) (col. 4 @ 14-19).

As related to claims 14, 15 and 18, the polymer jacketing is read as a retention sleeve that is hermetically sealed to the housing (col. 6 @ 2-4; col. 7 @ 20-23 and 27-28).

As related to claims 16 and 17, the power source is a rechargeable electrochemical battery (col. 4 @ 20-24).

As related to claim 19, the receiving coil can be used for telemetry (col. 6 @ 51-57).

As related to claim 20, the implanted medical device is a pacemaker (col. 2 @ 10).

As related to claim 21, Leysieffer substantially discloses the instant invention comprising an implantable medical device (54) adapted to be charged with an external recharging coil (106), the device comprising a housing (72) having an interior cavity, a proximal face, and an electrical feed-through, the hermetically sealed penetrations (108) are read as electrical/ recharge feed-through (col. 4 @ 56-60) on the proximal face, electronics carried in the housing interior cavity, the electronics configured to perform a medical therapy (74), a rechargeable power source (90) carried in the housing interior cavity and electrically coupled to the electronics; a means for recharging, a recharging coil (106), electrically coupled through the housing electrical feed-through (108) to the electronics and rechargeable power source (90) (Figures 1, 5; col. 4 @ 14-60).

As related to the recharging coil being centrally located and substantially carried on the housing proximal face, Leysieffer discloses the recharging coil is located on at least a part of the broad side of the housing (col. 7 @ 44-46). Absent any teachings of criticality or unexpected results, merely changing the location of the coil on the exterior face of the housing to a central location would be an obvious design choice. (Instant application, page 2, lines 15-18 - “the recharging coil can either be carried on the proximal face... or detached ... and located remotely”)

As related to the means for attaching the means for recharging, Leysieffer discloses the coil is attached to the housing using alignment details (poles) and attachment details (col. 4 @ 14-19) and the coil is connected mechanically tightly to the housing using polymer jacketing (104) and polymer over-molding, read as a means for attaching the recharge coil to the housing (col. 4 @ 42-53; col. 7 @ 20-23).

In the response filed 2/18/09, the Applicant submitted an Affidavit stating and providing data that efficiency of the charge transfer is optimized by positioning the primary recharging coil as concentrically as possible with the secondary recharging coil. While the Examiner appreciates this has been the finding of Mr. John E. Kast as noted in his Affidavit, if placement of the recharging coil concentrically on a proximal face of the housing was critical or if it proved unexpected results, it is maintained the Applicant would have made this point in the instant specification. In fact the instant specification states on page 2, lines 15-18 - "the recharging coil can with be carried on the proximal face... or detached... and located remotely". Given the instant specification does not discuss the criticality of the placement of the recharging coil centrally on the proximal face of the house, and does not discuss and unexpected results that are derived from placing the recharging coil centrally on the proximal face of the housing, it is accepted changing the location of the coil on the exterior face of the housing to a central location on the housing would be an obvious design choice.

The Applicant's arguments filed 2/18/09 have been fully considered, but they are not convincing.

The Applicant argues figures 6 and 8 of Leysieffer do not teach a centrally located coil. The Examiner has not referenced figures 6 nor 8 in the rejection of record, hence there will be no further comment on the Applicant's comments relative to figures 6 and 8.

The Applicant asserts in figure 5 that Leysieffer teaches away from locating a recharging coil centrally on a proximal face of an implanted device. The Examiner respectfully disagrees. When one reads further than the citation offered by the Applicant (column 5, lines 28-42), and

down to line 59 of column 5, Leysieffer discusses the benefit of compactness associated with this specific configuration, and given the receiving coil location, offers ways which the energy transmission can be optimized, hence Leysieffer is not read as teaching away from the instant invention.

3. Claim 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Leysieffer (US 6154677) in view of Baumann et al. (US 5279292) (both cited previously).

As discussed in paragraph 2 of this action, Leysieffer discloses the claimed invention except for locating a telemetry coil in the interior cavity of the housing.

Baumann et al. teach an implantable device charging evaluation system using a telemetry circuit and associated coil mounted in the housing to provide information on the alignment of the transmitting coil relative to the receiving coil and/or on the charging state of the direct voltage source (col. 2 @ 5-10). It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a telemetry coil and associated coil mounted in the housing in the Leysieffer system to optimize the efficiency and effectiveness of the recharging process and to ensure adequate power is maintained for successful operation of the device.

#### ***Statutory Basis***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fran Oropeza whose telephone number is (571) 272-4953. Fran's schedule typically is Monday and Tuesday 9AM-7PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl. H. Layno can be reached on (571) 272-4949. Carl's schedule typically is Monday, Wednesday, Friday 9AM–5 PM EST; Tuesday, Thursday 9AM–3PM and 9PM–11PM EST. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communication and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Frances P. Oropeza/  
Patent Examiner, Art Unit 3766  
May 26, 2009

/Carl H. Layno/  
Supervisory Patent Examiner, Art Unit 3766